

CLAIMS

I claim:

1. A device for monitoring the level of a substance in a container, the system comprising:

- 5 (a) a rod having a lower end positionable within the container in engagement with an upper surface of the substance in the container, an upper end positionable outside of the container and a central, rigid member connecting the lower end and the upper end and slidably positioned with regard to the container; and
- (b) a sensor positionable on the container and capable of initiating an alarm signal in response to the upper end of the rod engaging the sensor.

2. The device of claim 1 wherein the central member of the rod is formed from a number of segments.

3. The device of claim 2 wherein the segments are releasably secured to one another.

4. The device of claim 2 wherein a number of the segments include a recess at one end and a locking member opposite the recess.

5. The device of claim 1 wherein the rod extends through an opening in the sensor.

6. The device of claim 1 wherein the sensor includes at least one of: a switch engageable by the upper end of the rod, and a battery.

7. The device of claim 1 wherein the sensor includes a base member positionable on the container and an alarm mechanism spaced from the base member, wherein the base member transmits an operating signal to alarm mechanism when engaged by the upper end of the rod.

8. A device for monitoring the level of a substance through a wall of a container, the device comprising a first sensing member positionable on the container adjacent a lower end of the container, the first sensing member including a first housing securable to the container, a first detecting mechanism positioned within the housing, an alarm mechanism
5 operably connected to the first detecting mechanism, and a first power source operably connected to the first detecting mechanism and the alarm mechanism.

9. The device of claim 8 wherein the first detecting mechanism is at least one of an induction-based detecting mechanism and a capacitance-based detecting mechanism.

10. The device of claim 9 wherein the first detecting mechanism includes a stored lower limit capacitance value that is compared with an actual capacitance value sensed by the first detecting mechanism.

11. The device of claim 10 wherein the first sensing member includes a calibration mechanism operably connected to the first detecting mechanism and used to obtain the lower limit capacitance value.

12. The device of claim 9 wherein the first sensing member includes a timer operably connected to the first detecting mechanism and used to selectively operate the first detecting mechanism at predetermined intervals.

13. The device of claim 10 further comprising a second sensing member positionable on the container adjacent an upper end of the container, the second sensing member including a second housing and a second detecting mechanism.

14. The device of claim 13 further comprising a second capacitive plate on the board along with a ground plate.

15. The device of claim 9 wherein the first power source is a battery operatively connected to the first detecting mechanism.

16. The device of claim 9 wherein the first detecting mechanism is calibrated to detect at least one of: a solid material within the container, and an aqueous material within the container.

17. The device of claim 9 wherein the alarm mechanism is spaced from the first housing and receives a signal from the first detecting mechanism to operate the alarm mechanism.

18. The device of claim 9 wherein the alarm mechanism emits at least one of: an audible alarm, and a visible alarm.

19. The device of claim 8 wherein the first detecting mechanism is an electromagnetic wave-based detecting mechanism.

20. The device of claim 9, wherein the alarm is located remotely from the sensor.

21. The device of claim 18, wherein the sensor transmits a signal to trigger the alarm.

22. A device for sensing a level of a substance in a container, comprising:

- (a) a predetermined level of a substance;
- (b) a sensor for detecting when the substance reaches the predetermined level;
- (c) an alarm remotely triggered by the sensor when the predetermined level is reached.

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